

NDS Labs Workbench x Clowder integration

As part of CDDR project, we are revisiting the old "tool launcher" concept for new version of workbench.

It is expected that there is a 1:1 Clowder/WB pairing and don't currently plan to support multiple workbenches for a single Clowder. Current proposed architecture involves development on both workbench and Clowder side:

CLOWDER

- Implement API actions that can be queued for workbench
 - Send dataset 123 to workbench
 - Start container foo
 - Stop container bar
 - ...
 - EST: 4 days for implementing API queue service
 - 2 days for api endpoints to call service
- Basic workbench management page for users to see what they started or start new ones
 - Is this necessary or can workbench UI work? for short term?
 - Request to create new dataset from some Workbench directory?
 - Connect to running container
 - EST: 1 week for basic UI to call API actions

NDS LABS

- Move API from Go to Python Flask for easier development
- Implement new API endpoints needed by Clowder (not sure if some of these exist)
 - get /containers/id - return list of containers the user has running on WB
 - ...
 - EST: 2 days (see above)
- Implement sidecar shovel container
 - Mounts the same data volumes as the container(s?) it is associated with
 - Has a heartbeat service to ping RabbitMQ queue (or potentially Clowder)
 - if send dataset action, either download from Clowder and copy into mounted volume, or copy/symlink from locally mounted disk to analysis folder
 - can start/stop containers
 - ...
 - EST: 1-2 weeks

API Endpoints

Workbench (Go)

endpoint	description
authenticate	get token with 200
check_token	
refresh_token	
services	get array of service definitions add a service
accounts	get list of accounts add an account
stacks	get list of stacks add a stack
logs/stackid	get log for stack
start/stackid	start and stop existing stack
stop/stackid	
configs	service configuration options

Clowder

endpoint	description
api/workbench/transfer	queue an action for a remote container (transfer data)

api/workbench/start	
api/workbench/stop	